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- (ii) introducing a first DNA [comprising a nucleotide sequence containing at least one FLP recombination target site therein] into the FLP recombination target site in the genome of said cells by contacting said cells with said first DNA and FLP recombinase, and thereafter
- (iii) introducing the cells produced by the process of step (ii) into said [subject] non-human host organism.

26. (Amended) A method according to Claim 25, further comprising contacting the genomic DNA from said [subject] non-human host organism with FLP, thereby recovering the transfected DNA containing said first [gene of interest] DNA from the genome of said transfected organism.

27. (Amended) A method according to Claim 26, further comprising introducing at least a portion of a second [gene of interest] DNA comprising a FLP recombination target site into said FLP recombination target site of the non-human host organism.

28. (Amended) A method according to Claim 25, further comprising introducing [at least a portion of] a second [gene of interest] DNA comprising a FLP recombination target site into one of the FLP recombination target sites of said [subject] non-human host organism.

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42. (Amended) A method for the site-specific integration of transfected DNA into the genome of a [cell according to Claim 29] mammalian cell wherein the genomic DNA of the cell contains at least one FLP recombination target site, said method comprising:

- (i) contacting said genome with[:
(a)] FLP recombinase[,] and

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[(b)] a first DNA [comprising at least a portion of a first gene of interest;

wherein said first DNA contains at least one FLP recombination target site]; and thereafter

(ii) maintaining the product of step (i) under conditions suitable for site-specific integration of said first DNA [sequence] to occur at the FLP recombination target site in said genome of the [host] mammalian cell[s].

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43. (Amended) A method according to Claim 42 wherein said FLP recombination target site in the genomic DNA of said mammalian cell is positioned within [at least] a portion of a [one or more] gene[(s)] of interest.

44. (Amended) A method according to Claim 42 further comprising additionally contacting said [host] mammalian cell with a second DNA[, wherein said second DNA is selected from:

(a) at least a second portion of said first gene of interest, or

(b) at least a portion of a second gene of interest];

wherein said second DNA contains at least one FLP recombination target site; and wherein said second DNA, when combined in reading frame with said first DNA, provides a functional gene.

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47. (Amended) A method according to Claim 42 wherein said FLP recombination target site is introduced into the genome of said [host] mammalian cell by transfecting said [host] mammalian cell with a DNA fragment containing at least one recombination target site therein.

48. (Amended) A method according to Claim 42 wherein the FLP recombination target site in the genomic DNA of said [host] mammalian cell is so positioned in a gene of interest that

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the introduction of additional DNA sequences therein will inactivate the [target] gene of interest.

49. (Amended) A method for the site-specific integration of transfected DNA into the genome of a [host according to Claim 35] transgenic, non-human mammalian cell which contains an FLP recognition target site in the genome of said mammalian cell, said method comprising:

- (i) contacting said genome with[:]
 - [(a)] FLP recombinase, and
 - [(b)] a first DNA [comprising a nucleotide sequence containing at least one FLP recombination target site therein]; and thereafter
- (ii) maintaining the product of step (i) under conditions suitable for site-specific integration of said first DNA [sequence] to occur at the FLP recombination target site in said genome of the [host] mammalian cell.

50. (Amended) A method according to Claim 49 wherein said FLP recombination target site is positioned within [at least] a portion of [one or more] a gene[(s)] of interest.

51. (Amended) A method according to Claim 49 further comprising additionally contacting said [host] mammalian cell with a second DNA, wherein said second DNA [is selected from:

- (a) at least a second portion of said first gene of interest, or
- (b) at least a portion of a second gene of interest;

wherein said second DNA] contains at least one FLP recombination target site; and wherein said second DNA, when combined in reading frame with said first DNA, provides a functional gene.